



# 200M Powerline Ethernet Adapter

PL-501v2-EU/US/UK

User Manual

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## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

## CE mark Warning

This is a class B device, In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

## WEEE



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## **Revision**

User's Manual for PLANET 200M Powerline Ethernet Adapter  
Model: PL-501v2-EU/US/UK  
Part No.: 2081-AE0160-001

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# Chapter 1: Introduction

## Overview

Thank you for purchasing PLANET 200M Powerline Ethernet Adapter. With Planet powerline communication products, your power outlets are no longer to be viewed only as power receptacles but also as network connection point. The PL-501v2 is a Powerline to Ethernet Bridge with a RJ-45 Ethernet interface which directly connecting to your computer's network card. With multiple outlets in almost every room, PL-501v2 allows you to use your existing electrical wiring to give your entire household or Office access to your network connection without the clutter of messy wiring around the house and Office.

By using Planet's powerline communication products, you will not need to spend time and money to installing Ethernet cabling to share network. It is simply by plugging the PL-501v2 into the wall anywhere in the house or office. The 128-Bit AES data encryption improves the security and reliability, to protect the data leaked by someone else. Customers will not need to worry about the data will be leaked. The speed up to 200 Mbps data rate which provides customers the highest speed in powerline data transferring. This product is cost-effective, easy to install, and do not require any new wired.

## Features

- ◆ Direct attached to power outlets
- ◆ HomePlug AV compliant
- ◆ Connect 10/100 Ethernet network to Powerline network
- ◆ Up to 200Mbps data rate on the powerline
- ◆ Up to 200 meters between powerline nodes
- ◆ 128-Bit AES link Encryption for security and reliability
- ◆ Co-existence with HomePlug 1.0 and HomePlug 1.0 Turbo
- ◆ Built-in QoS
- ◆ Throughout the whole house, just use your power circuit to access the Internet or PC network
- ◆ 16 bridged devices per station
- ◆ IGMP snooping for multicast to multiple uni-cast mapping

## Specification

Model	PL-501v2-EU/US/UK
Standard	HomePlug AV compliant IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX
Ports	One RJ-45 port
Speed	UP to 200Mbps
Encryption	128-Bit AES encryption
Modulation	1024/256/64/16/8 QAM,QPSK, BPSK
Forward Error Correction	Turbo Codes
Channel Access	TDMA, CSMA, CA
LED	PWR, HP, ETH
Powerline Frequency Band	2MHz to 30MHz
Dimensions	73.5 x 105 x 36.5 mm ( W x D x H )
Weight	120g ( net weight )
Operating Temperature	0~40°C
Operating Relative Humidity	10~90% (non-condensing)
Storage Temperature	-25~70°C
Storage Relative Humidity	5~95% (non-condensing)
Power	100~240V AC,0.1A, 50~60Hz

## Package Contents

- PL-501v2 x 1
- CD ROM x 1 (user's manual, utility)
- RJ-45 Ethernet cable x 1
- Quick installation Guide x 1

## System Requirements

- At least 2 Powerline devices
- Available Ethernet port each computer or network
- Available empty power outlet
- Standard home power line wiring
- CD-ROM utility

## Panel



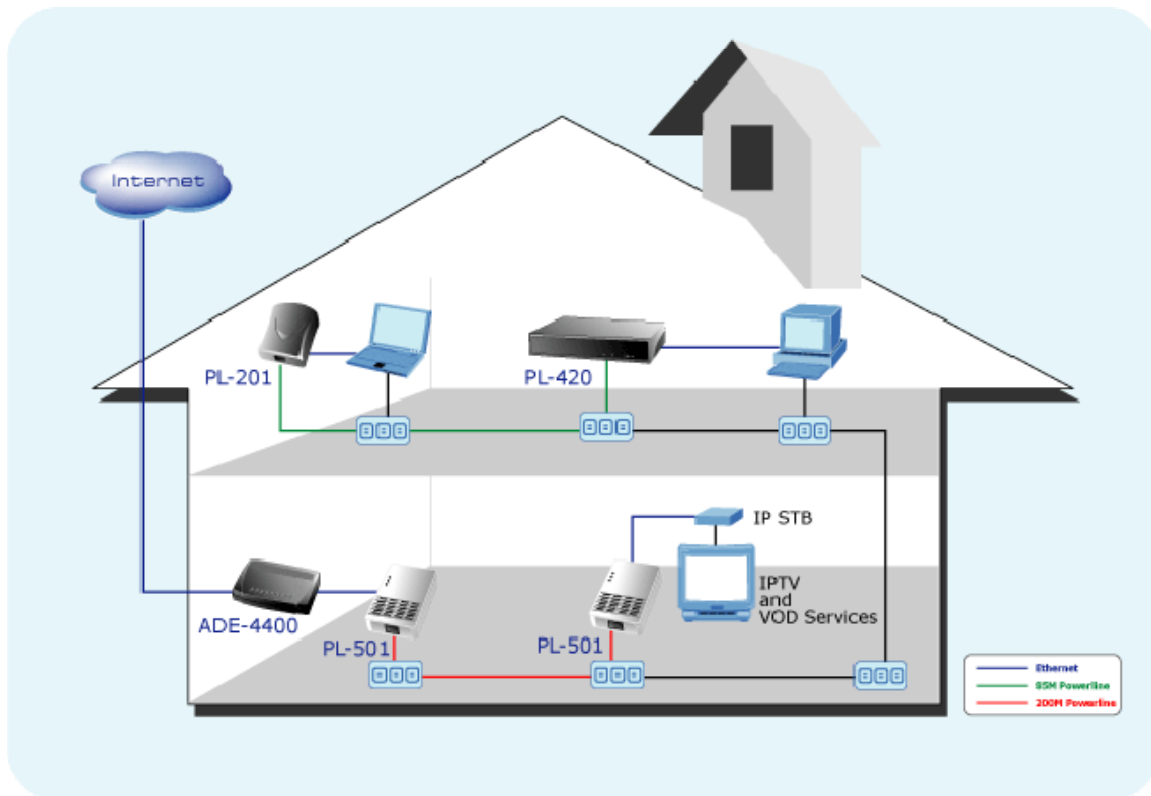
## LED definition

LED	Description
PWR	Solid Blue or off when Power On or off
HP	Steady on indicates there exists another powerline device
	Blinking indicates the data are transferring
ETH	Steady on indicates the RJ-45 port has correctly connected to the network card of your PC or the Ethernet network
	Blinking indicates the data are transferring

## Button definition

Button	Description	
Security	Press security button during 1~3 seconds.	Join another HomePlugAV network
	Press security button more than 10 seconds	Set its security to random value
Reset	Reset to factory default	

## Wire Diagram





## Chapter 2: Installation

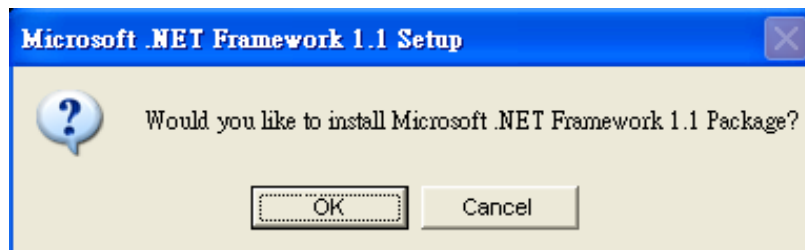
### Overview

The installation of 200M Ethernet Adapter will only take minutes. No need to set up long wires through out the house, just simply install the utility, and physically plug the unit into the wall outlet, then to connect RJ-45 to the computer. Users can select to adjust its security functions and the platform of the network after the installation. For further assistance, please read our Frequently Asked Questions section in our Web site.

### Running the InstallShield Wizard

Please verify that no other Powerline Management Utilities are installed before installing this product. If other utilities were installed, uninstall them and restart before installing this software.

To install, insert the utility CD into the computer's CD-ROM drive. The main page shall pop up, then to press the link to install the software. Alternatively this can also be done manually by double clicking the setup.exe file on the CD.

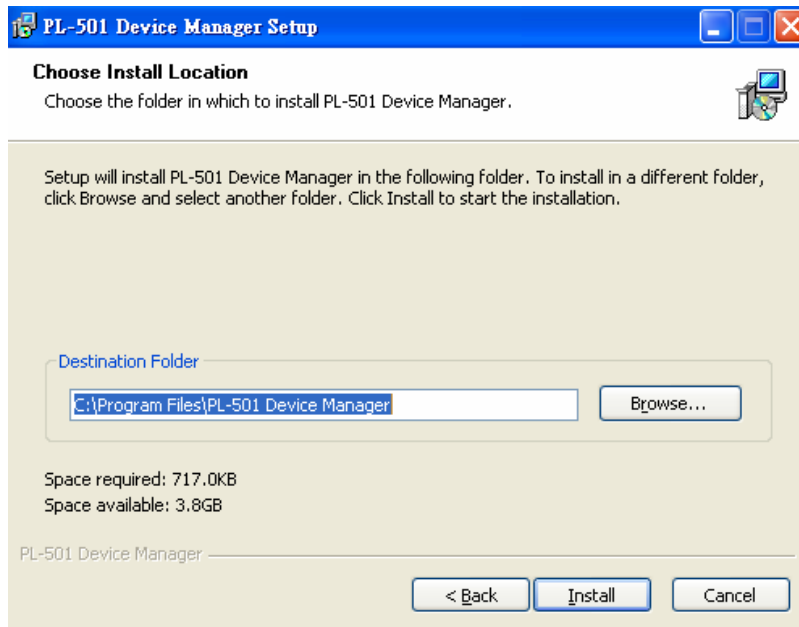


**Microsoft .NET Framework 1.1** is needed for installing PL-501v2 utility. The wizard will check automatically whether the **Microsoft .NET Framework 1.1** was installed on your PC or not. If not, the wizard will pop up a message box. Click OK to install.

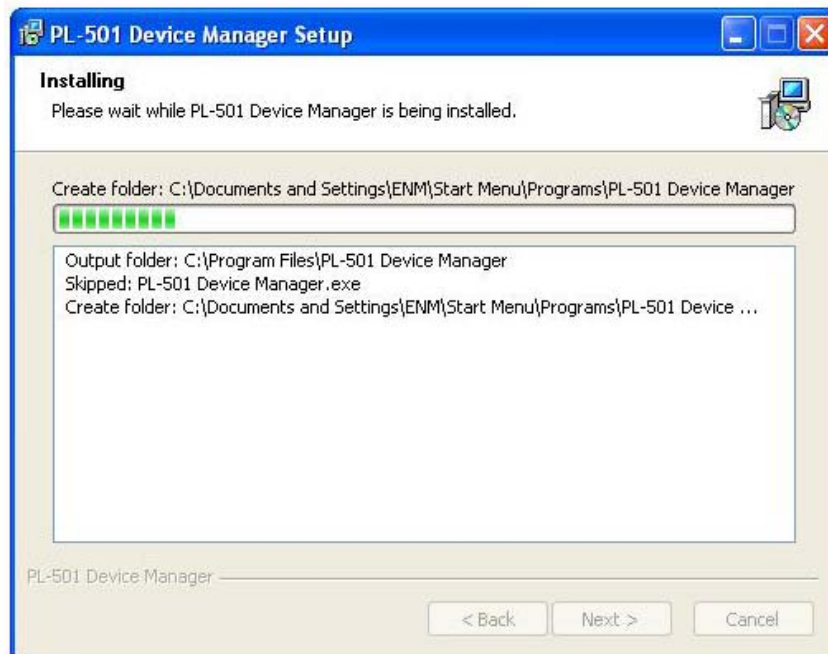
Once the software is loaded, it will display a dialog as following:



Please click on '**Next**' to continue the installation.



This section allows you to change the default directory where the program is installed. Or go '**Back**'. If you don't want to change it, click on **Install** to continue the installation.



This screen shows the progress of the installation.



This screen shows that the installation was completed successfully. Click on **Finish** to exit the wizard.

# Chapter 3: Configuration

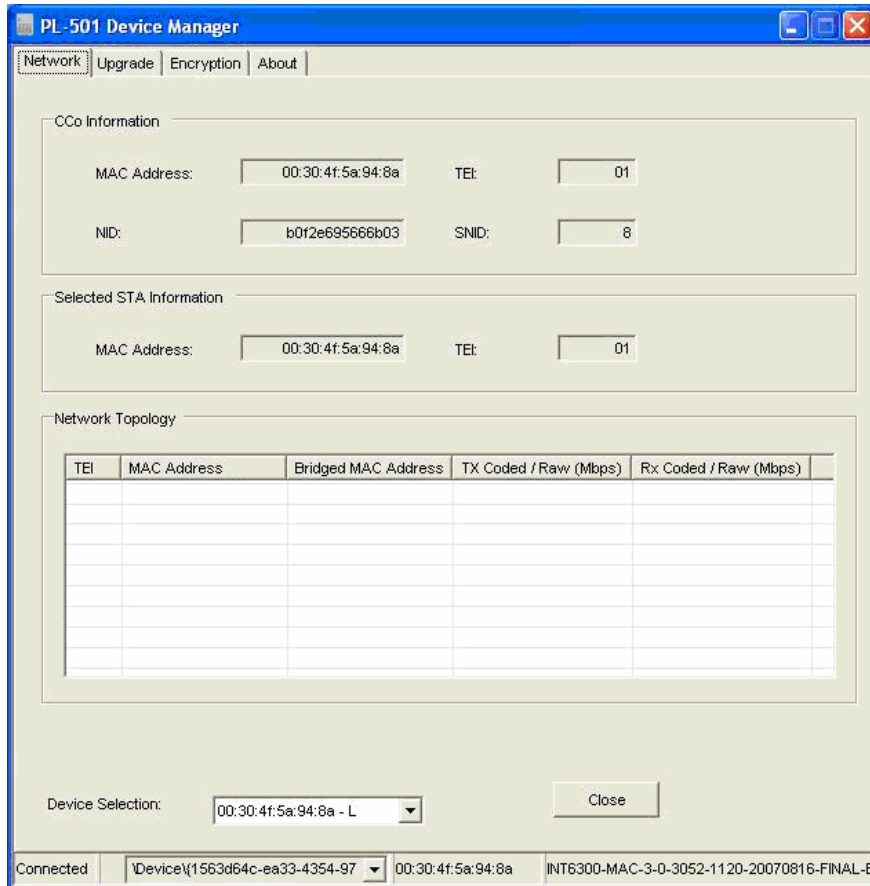
## Overview

The PL-501v2 uses 128-bit AES encryption to block outside access. The key is set by using the Configuration Utility on the CD. By default, the protection is enabled, however, it is recommended to change the default network key. All your powerline devices must use the same network key in order to be connected together.

## Diagnose Powerline network

### Part 1: Diagnose a Local Powerline device

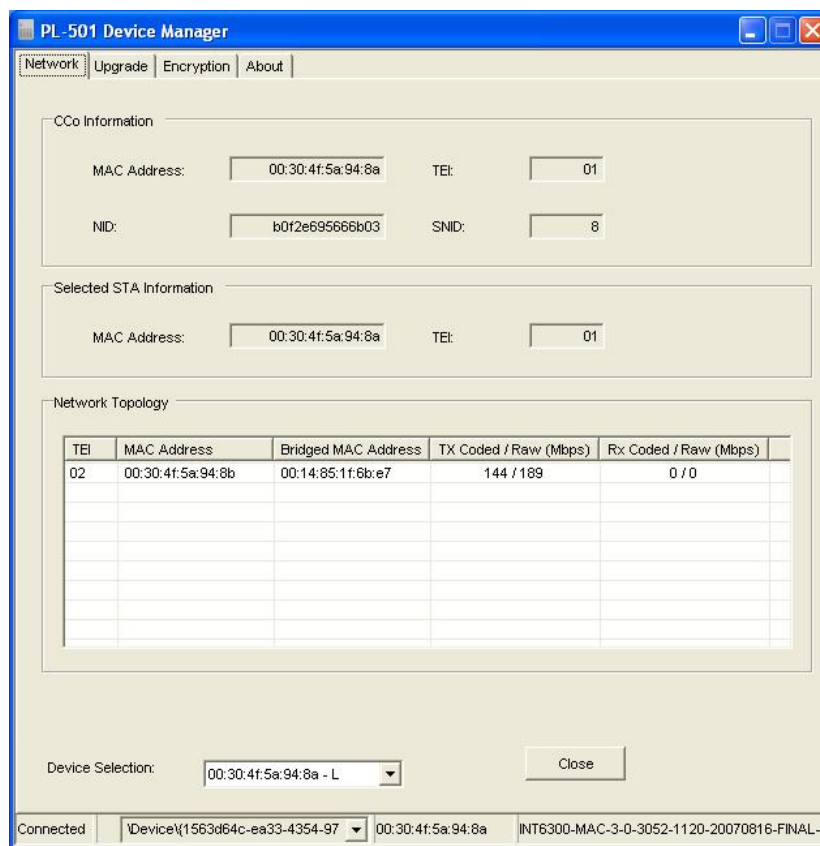
Double click the **PL-501 Device Manager** icon on your Desktop, and utility screen will show up as below:



The Network tab shows the powerline units that are connected to the current computer and other powerline devices on the Network Topology, and it will also display Mac Address of each device.

**\*Note\*** If you do not see ANY unit in the device status but the powerline device does exist, try to unplug all devices and plug them back. Meanwhile, please make sure the cable is the right type and working correctly. If all seems to be correct, and you still receive nothing in the **Device** window, try rebooting your computer.

## Part 2: Diagnose a Network Powerline device



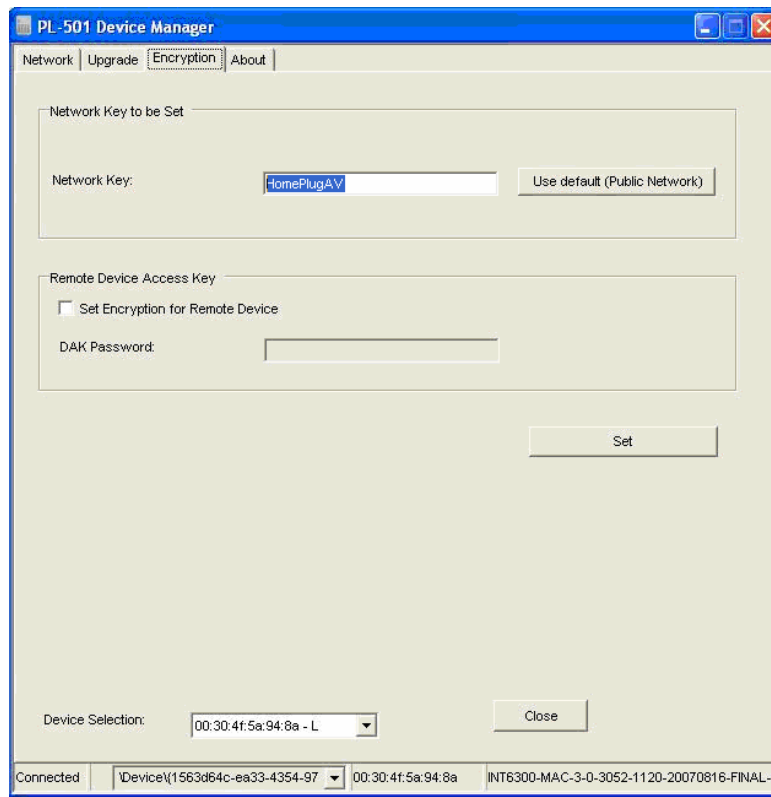
The **Network** tab shows all the other powerline units on your Network Topology. It will represent them by MAC Address, and will also show the available bandwidth to each unit (Units farther away from another powerline device might have a lower Data Rate).

**\*\*Note\*\*** Only units with the same **Network Key** will be shown.

**\*\*Note\*\*** If a unit shows MAC Address of all 0's, this unit might not have a solid connection, or might not connect at all.

**\*\*Note\*\*** If there are units in the home network, but nothing displays in this Network scan, try to unplug all devices, and plug them back (Only do this with the units that you do not view in the network screen, you don't have to do this with all units.) If the problem persists, try to move the unit closer to this current unit (adjacent plugs on the same wall socket is most preferable). If the problem still persists and that unit is still not shown on the network, then the unit might be defective please contact technical support. Otherwise if you view the unit working, distance might be the only issue.

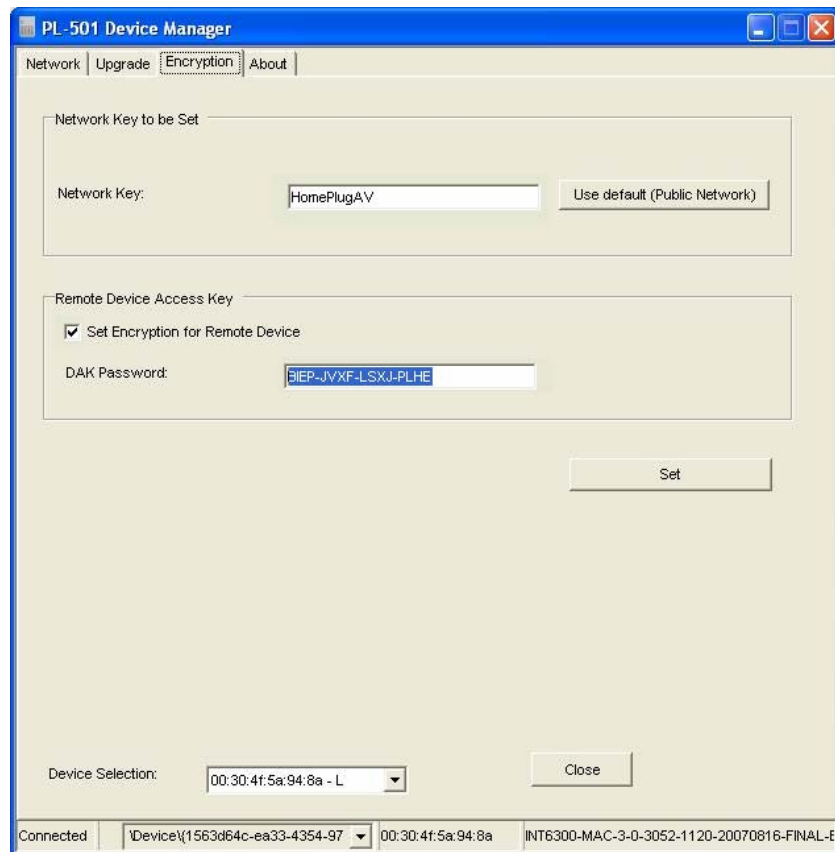
## Setting Up Security on a Local Powerline device



The **Encryption** tab will allow you to change the **Network Key** to the unit that is currently connected to this computer. This network key encrypts all data that is sent from this unit using 128-bit data encryption standard (AES).

**\*\*Note\*\*** Every unit on your home network **MUST** have the same **Network Key** for connectivity to be established throughout your home. The default network key is "**HomePlugAV**".

## Setting Up Security on a Network Powerline device



The **Encryption** Tab will allow users to use one primary computer to control the **Network Key** of all units on the home network. Enter both the Remote Device password in the *DAK Password* field and the desired *Network Key* in the field provided. Click “**Set**” to save this value to the remote Powerline device. If the *DAK Password* is left blank, the *Network Key* will be saved to the local Powerline device only.

All Powerline devices must use the same *Network Key*, or they will not be able to communicate with each other.

Click Close to exit the PL-501v2 utility.  
Setup is now complete.

If your PC is not the device you wish to use with the 200Mbps Powerline Ethernet Adapter, connect the Ethernet cable from the 200Mbps Powerline Ethernet Adapter to the desired device.

**The 200Mbps Powerline Ethernet Adapter is now ready for using.**

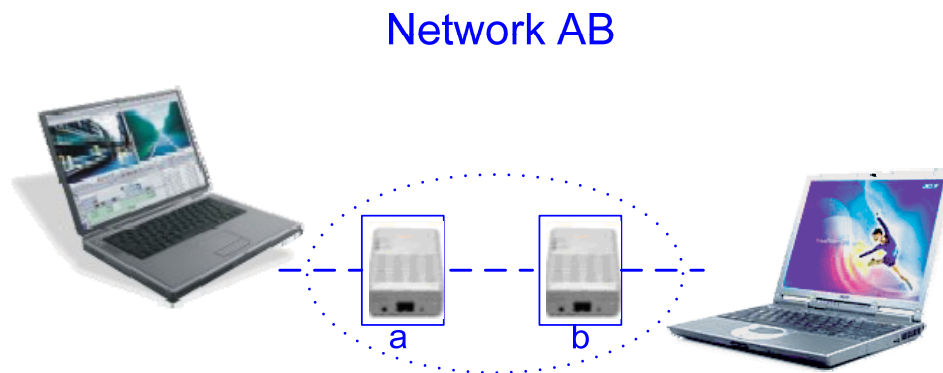
## Security Button

This section describes how to use Security button for configuration in the following situations:

- Establish a new security network (Network AB)

The procedure is as follows:

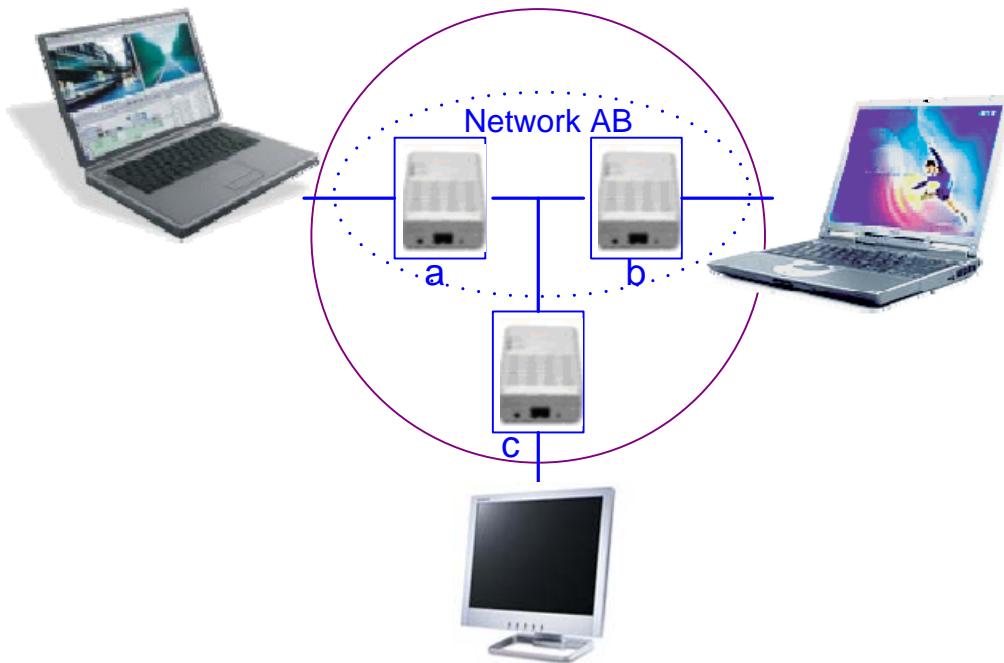
1. Press the security button on the adapter (a) during 1~3 seconds.
2. Press the security button on the adapter (b) during 1~3 seconds.
3. The PWR LEDs start to flash.
4. After a few seconds, the PWR and HP LEDs should be on. The connection of Network AB is success.



- Use random value of security network (Network AB)
  1. Press the security button on adapter (a) more than 10 seconds until all LEDs off.
  2. Press the security button on adapter (a) during 1~3 seconds.
  3. Press the security button on adapter (b) during 1~3 seconds.
  4. The PWR LEDs start to flash.
  5. After a few seconds, the PWR and HP LEDs should be on. The connection of Network AB is success.
- Establish adapter (c) to join an existing network (Network AB).



## Network ABC



The procedure is as follows:

1. Press the security button on the adapter (a) or (b) during 1~3 seconds.
2. Press the security button on the adapter (c) during 1~3 seconds.
3. The PWR LED starts to flash.
4. After a few seconds, the PWR and HP LEDs should be on. The configuration is successful.

### Reset Button

This section describes how to use Reset button, this button can be used to clear ALL data and restore ALL settings to the factory default values.

The procedure is as follows:

1. Hold the reset Button down while Power On for a few seconds.
2. Release the reset button.
3. All the LEDs will off, and then start again.
4. PL-501v2 is now using the factory default values.